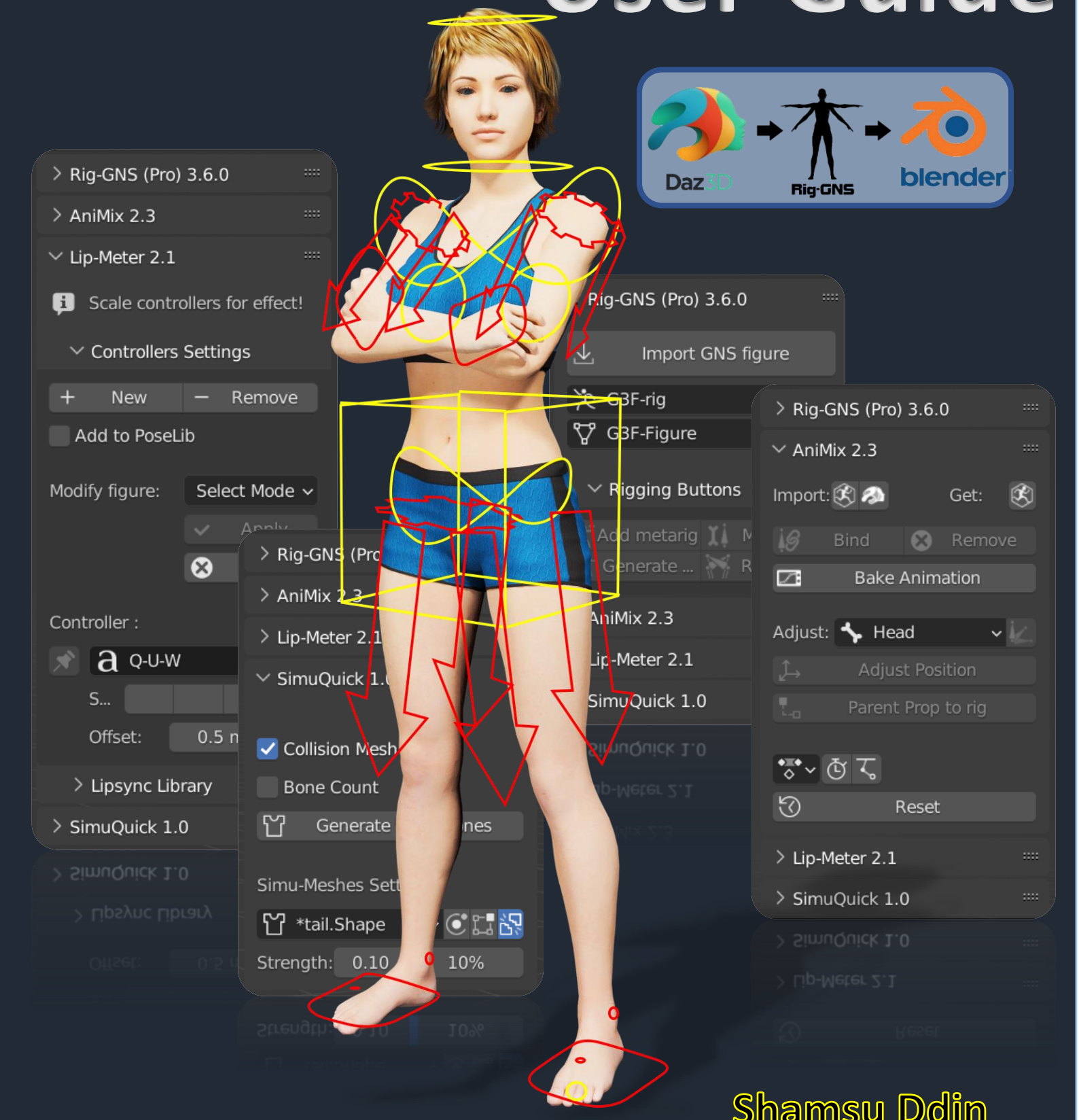
Rig-GNS (Pro) Blender add-on User Guide



Shamsu Ddin

From 22722studios

A guide for Rig-GNS 3.6 Plug-in for blender.

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Rig-GNS: https://gum.co/yFocf

Features:

1. **Rigify Integration:** Rig Genesis figures with Rigify's advanced rigging system with just few clicks.

2. **Broad Figure Compatibility:** Rigging capabilities for Genesis 3, Genesis 8/8.1, and the latest Genesis 9 figures.

3. **Animation Retargeting:** Retarget animations from Mixamo, Daz, Rokoko, and the Actorcore Animation Library.

4. **Export to Daz:** Export keyframed and retargeted animations from Blender to Daz Studio.

5. **Adjust Animation**: Easily fine-tune retargeted animations for precise body tilt and control of body parts.

6. **Auto Mouth-Shapes Generation**: Achieve precise and natural lip-sync with automatic mouth-shapes generation.

7. **Quick Hair and Cloth Physics**: Enjoy the convenience of quick and efficient hair and cloth physics simulation.

8. **Enhanced Material Shaders**: Improved and simplified material shaders for both Cycles and Eevee render engines.

9. **Multiple Figure Support:** Work with multiple figures in a single scene, providing a streamlined workflow for complex projects.

10. **Integration with Daz Add-ons**: Compatibility with Daz to Blender Bridge as well as Diffeomorphic Daz Importer.

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INTRODUCTION

Rig-GNS is a cutting-edge Blender add-on specifically designed to revolutionize the rigging and animation process for Genesis figures with seamless integration of Mixamo, Daz, Rokoko and Actorcore animations. Additionally, it empowers users to effortlessly create lifelike lip-sync and facial expressions, as well as quick and easy hair and cloth physics for captivating animations.

Rest assured, Rig-GNS has been thoroughly tested with both Blender 2 series and Blender 3 series. The Genesis figures utilized during testing were exported from Daz Studio 4.21 and prior versions. Rig-GNS operates flawlessly on both Windows and Mac OS.

User-Friendly Interface:

We understand the challenges of learning a new add-on, which is why the Rig-GNS User-interface was meticulously designed to be user-friendly with four powerful tabs to enhance your workflow: Rigging tab, Animixa tab, Lip-meter tab and Simu-quick tab.

1. **Rigging Tab:** This tab provides a straightforward approach to import and rig your Genesis figures using Rigify. Additionally, we've incorporated a convert button to ensure compatibility with figures exported using Diffeomorphic or Daz2Blender bridge.

2. **AniMixa Tab**: Seamlessly retarget Mixamo, Daz, Rokoko and Actorcore animations to your Genesis figures with ease. You can also export animations from Blender back to Daz, streamlining your animation pipeline.

3. **Lip-Meter Tab**: Unlock the potential of your character's performance by effortlessly creating lip-sync and expressive facial animations, ensuring compelling and emotive character interactions.

4. **SimuQuick Tab**: Elevate your animations with stunning hair and cloth physics, providing dynamic and realistic movement to your characters' attire.

In this comprehensive guide, each tab's functionality will be explored in detail, allowing you to harness the full potential of Rig-GNS for your projects.

CHAPTER ONE: *Getting Started with Rig-GNS*

1.1 Exporting Genesis figure from Daz

To begin using Rig-GNS, you first need to export your Genesis figure from Daz Studio. Follow these steps:

i. **Load Genesis Figure:** In Daz Studio, navigate to the Smart Content pane and select "Figures." Double-click on any Genesis 3, Genesis 8, or Genesis 9 base figure to load it into the scene. (*See figure 1.1.1*)

Figure 1.1.1 Load Genesis Base

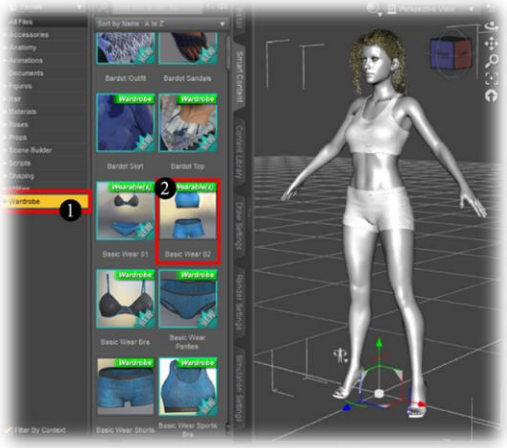


Figure 1.1.2 Add Items to Figure

ii. **Adding Items**: Customize your figure by adding clothing, hair, or accessories from the Smart Content pane. Click on the preferred tab (e.g., hair, Wardrobe, Props) and choose the desired item from the list. *(See figure 1.1.2)*

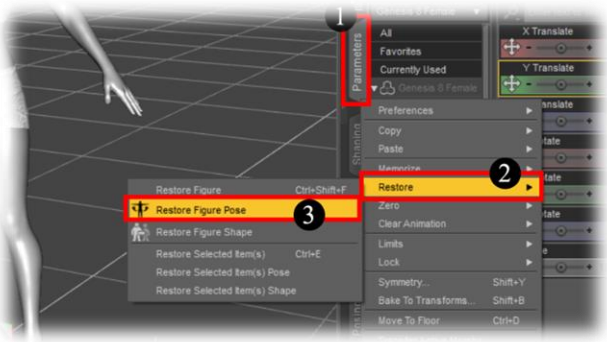


Figure 1.1.3 Restore Figure Pose

iii. **Restore Figure Pose**: If any poses were applied to the figure, right-click on the Parameters Pane and select "Restore" > "Restore Figure Pose" to reset the pose. (*See Figure 1.1.3*)

iv. **Export figure as FBX:** With the figure selected in the scene, go to the File menu and choose "Export." (*see figure 1.1.4*). In the save window, save the file with a preferred name to a designated folder and change “Save as type” to Autodesk FBX . (S*ee figure 1.1.5*).

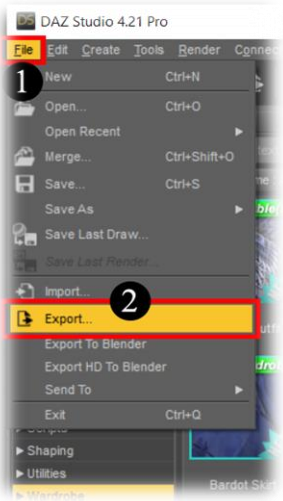


Figure 1.1.4 Export Figure

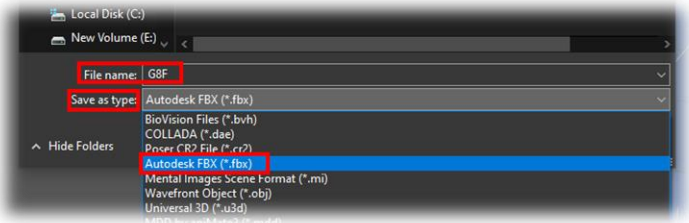


Figure 1.1.5 Save as Autodesk FBX

v. **Configure Export Options**: In the export window, ensure the format is set to Binary (e.g., FBX 2012 - Binary). Check the required options under the objects and output settings, including "Collect Textures to Folder," "Merge Clothing into Figure Skeleton," "Allow Degraded Skinning," and "Allow Degraded Scaling." *(See figure 1.1.6)*

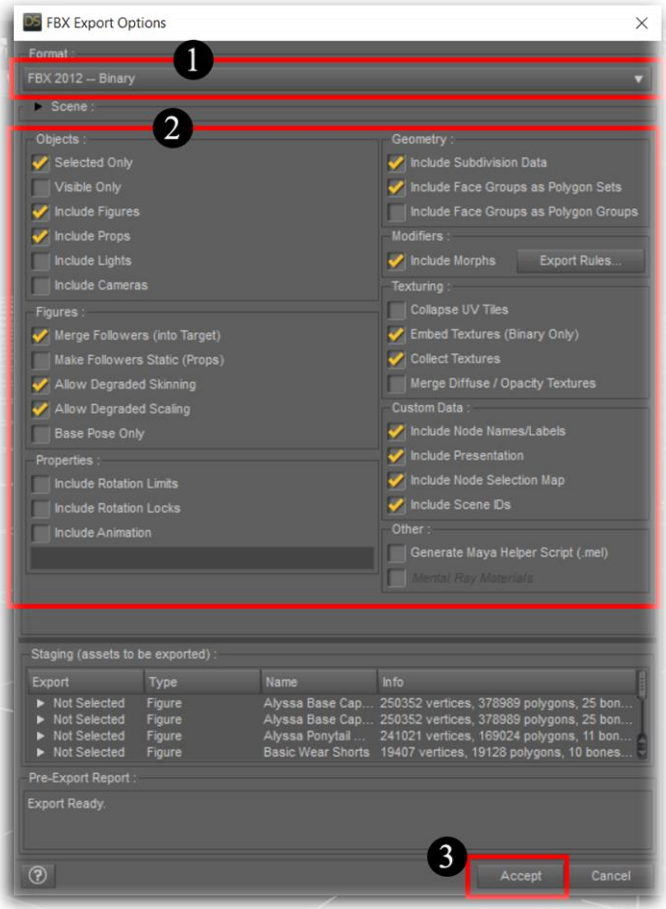


Figure 1.1.6 Checked Boxes

1.2 Importing Genesis Figure in Blender.

After exporting the figure from Daz Studio, follow these steps to import it into Blender and begin the rigging process with Rig-GNS:

Figure 1.2.1 Import Figure

i. Clear Blender Scene: Open Blender and ensure the scene is cleared.

ii. Access Rig-GNS: Press the "N" key on your keyboard to bring up the properties panel. Select Rig-GNS from the 3D viewport tabs.

iii. Import Genesis Figure: In the UI, expand the "Rig-GNS" panel and click the "Import GNS Figure" button. Locate the FBX file exported from Daz Studio and select "Import Genesis Figure" to load the file into Blender.

1.3 Start rigging process.

To initiate the rigging process, expand the "Rigging Buttons" tab and follow these steps:

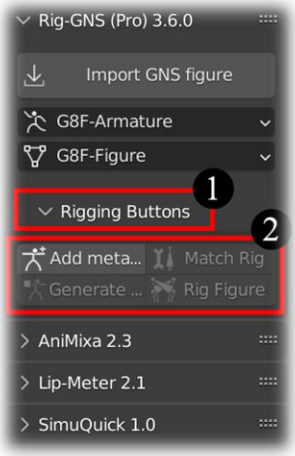


Figure 1.3.1 Rigging Buttons

i. **Add Metarig**: Click "Add Metarig" to create a metarig for the figure.

ii. **Match Rig**: Select "Match Rig" to align the metarig with the figure.

iii. **Generate Rig**: Click "Generate Rig" to generate the final Rigify rig for the figure.

iv. **Rig Figure**: Complete the rigging process by clicking "Rig Figure." Ensure the Rigify add-on is enabled before proceeding with these steps.

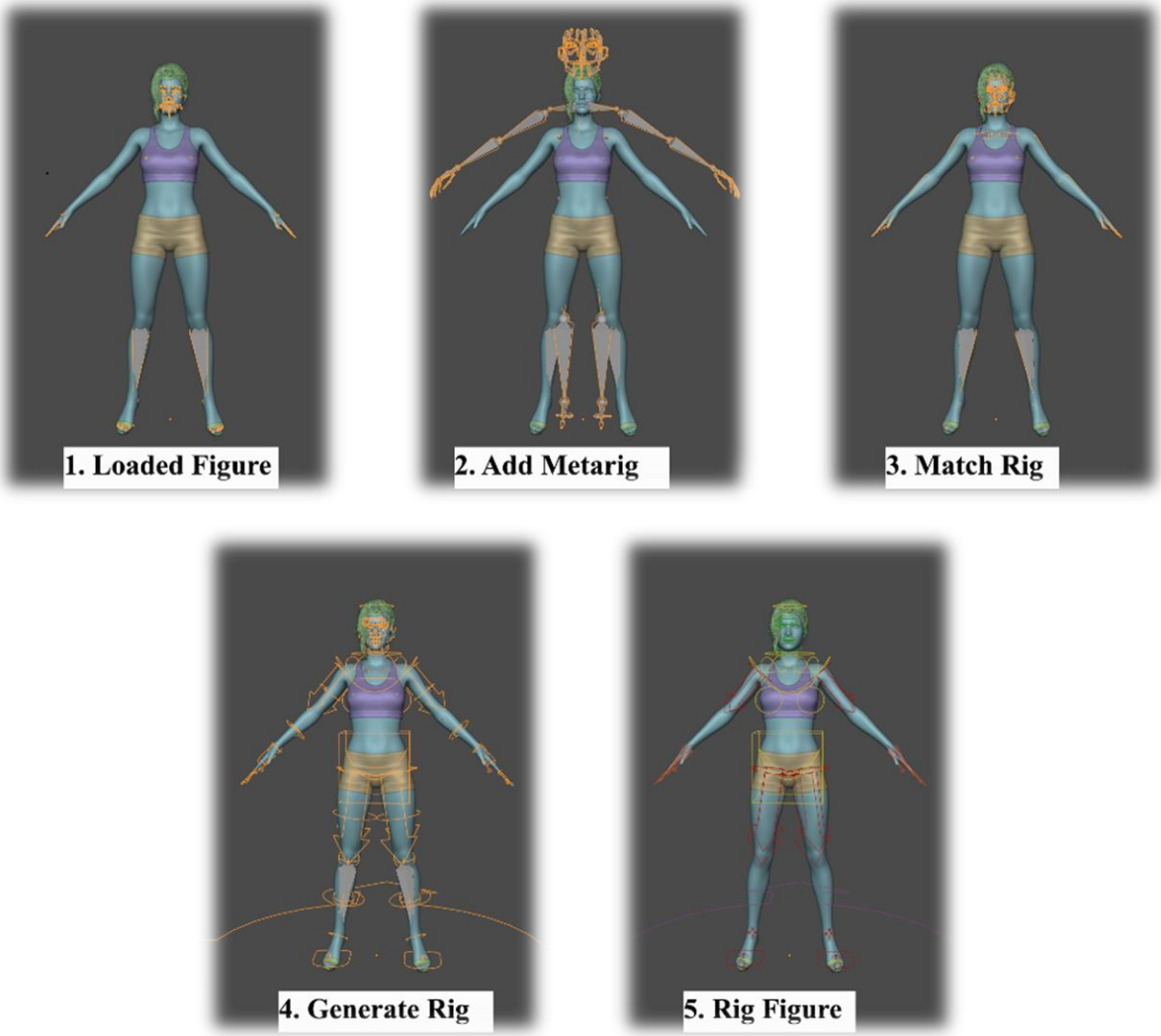


Figure 1.3.2 Rigging Figure

1.4 Compatibility with Diffeomorphic & D2B Bridge.

Rig-GNS is fully compatible with figures exported from Daz to Blender using Diffeomorphic Export or D2B Bridge. To utilize this feature, follow these steps. (*See figure 1.4.1 and figure 1.4.2*)

Figure 1.4.1 *Export with Diffeomorphic* * *Export with D2B Bridge*

i. Import Figure with Desired Export Option: Import the figure into Blender using the export option of your choice, either Diffeomorphic Export or D2B Bridge.

ii. Convert Figure to GNS: In the "Rigging Buttons" tab, the "Convert D-I to GNS" button will appear for figures exported using Diffeomorphic Export, and the "Convert D2B to GNS" button will appear for figures exported with Daz to Blender Bridge.

iii. Click Convert Button: Click the corresponding "Convert" button to enable the rigging process for the figure.
(*See figure 1.4.3 and figure 1.4.4*)

Figure 1.4.3 Convert DTB to GNS button

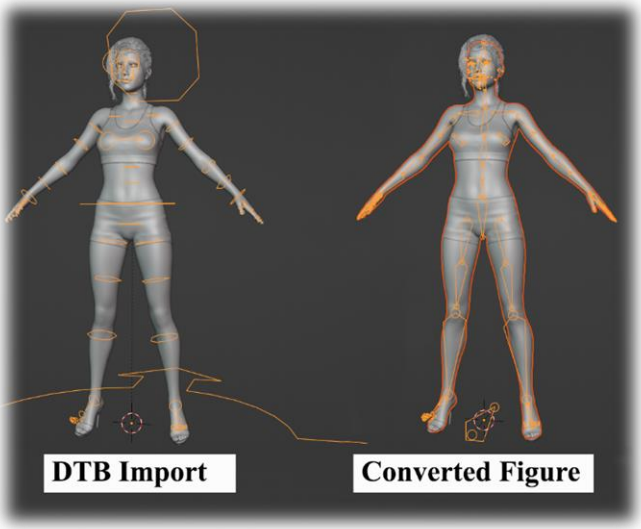


Figure 1.4.4 Convert D-I to GNS button

1.5 Fix Rigging

In certain cases, additional items added to the figure in Daz Studio may disfigure the vertex order, affecting the placement of bones in Blender. To identify such issues, you can hide these added items in the scene pane, which will reveal any potential disfigurement of the figure caused by these items. *(See figure 1.4.1)*

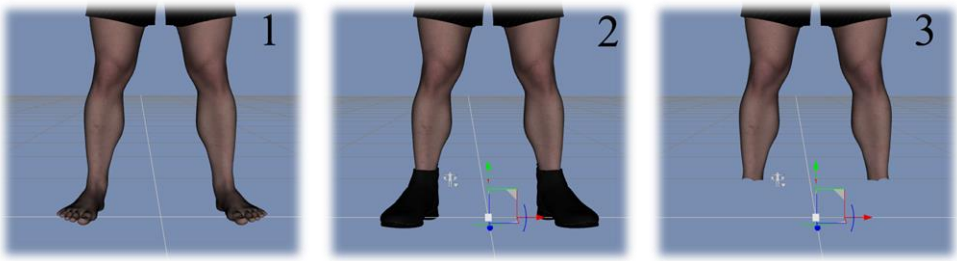


Figure 1.5.1 Added item replaces vertices on figure

To address this issue:

i. After importing such figures in blender, the add-on prompt you of this disparity when you press the **Add Metarig** button. *(See figure 1.5.2)*

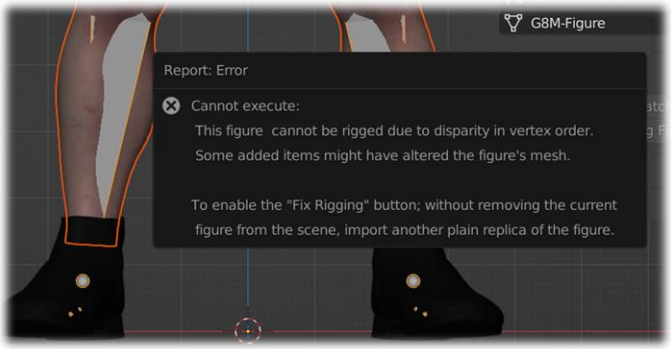

G8M-Figure
Report: Error
Cannot execute:
This figure cannot be rigged due to disparity in vertex order.
Some added items might have altered the figure's mesh.
To enable the "Fix Rigging" button; without removing the current figure from the scene, import another plain replica of the figure.

Figure 1.5.2 Error message during rigging

ii. To enable the "**Fix Rigging**" button, without removing the current figure from the scene, return to Daz studio where you still have the figure. Now delete all added items so that only the plain figure is left in the scene. *(See figure 1.5.3).*

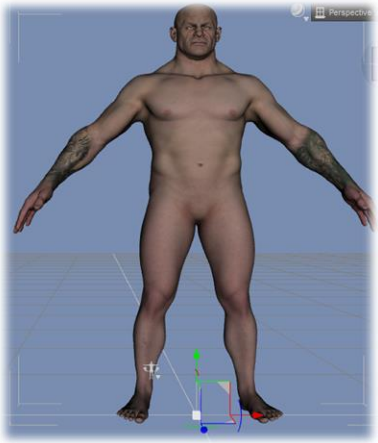


Figure 1.5.3 Plain Figure

iii. Export the figure again using the conventional Daz FBX export. Importing the figure in blender will enable the "Fix Rigging" button. Now, click the button, and continue the rigging sequence. *(See figure 1.5.4)*

Figure 1.5.4 Fix Rigging Button

CHAPTER TWO: *Animation with AniMixa*

2.1 Getting Mixamo Animation

To obtain Mixamo animations for your Genesis figure, follow these steps:

i. **Get Mixamo Animation**: After completing the rigging process, expand the "AniMixa" panel and click on the "Get" button. Then select the “Mixamo” option from the dropdown list to visit https://mixamo.com, where you can find a vast library of animations. (*See figure 2.1.1*)

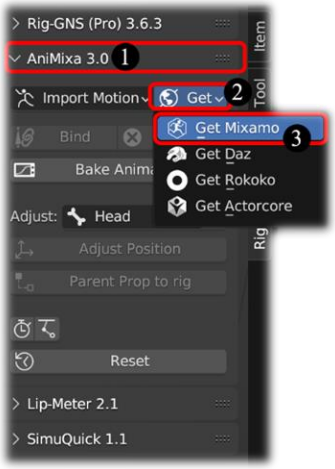


Figure 2.1.1 Get Mixamo

ii. **Set Preview Character**: Ensure you are logged in and have the preview character set as "X Bot" by searching for it in the Character tab.
(*See figures 2.1.2 and 2.1.3.*)

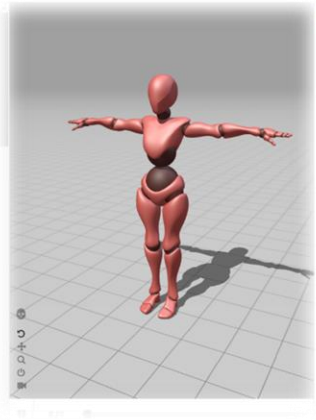


Figure 2.1.2 Preview

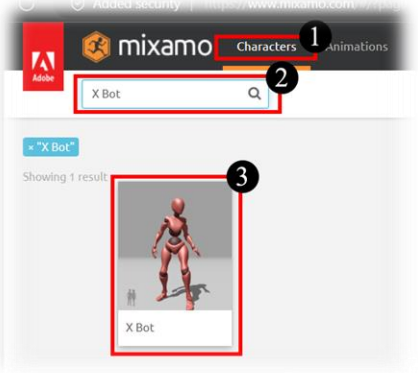


Figure 2.1.3 Search X Bot

iii. **Search Animation**: Navigate to the Animations tab and use the search box to find the desired animation. Select the preferred animation to assign it to the preview character.
(See figures 2.1.4.)

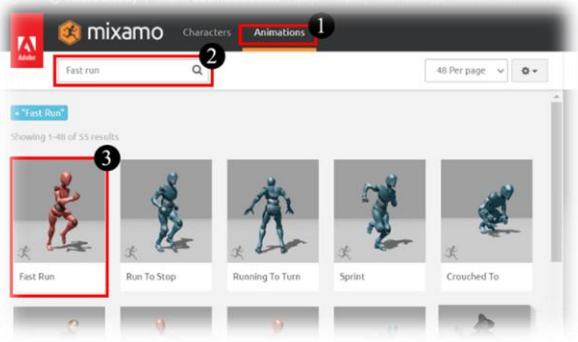


Figure 2.1.4 Search Animation0

iv. Download Settings: Click the Download button

on the right side to open the download settings. Set the format to "FBX Binary (.fbx)" and optionally change the skin to "Without Skin." Click "Download" to save the animation file. (*See figure 2.1.5*)

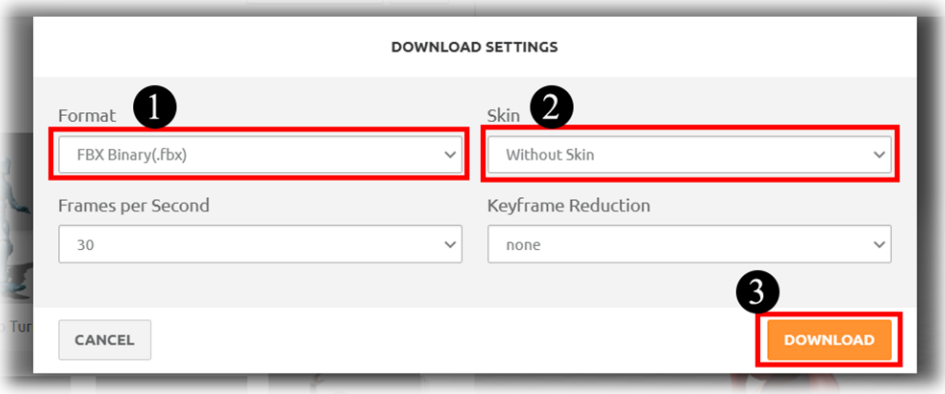


Figure 2.1.5 Download Settings

2.2 Using Mixamo Animation

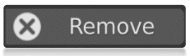
After downloading the Mixamo animation, follow these steps to use it with Rig-GNS:

i. Click the "Import Motion" button under the AniMixa tab and select the "Mixamo" option. Locate the downloaded file and select "Import Mixamo Figure."

(*See figure 2.2.1*)

ii. To preview the animation, click "Bind"

to apply the animation to the figure.

iii. Animation can be discarded by clicking the **Remove** button. 

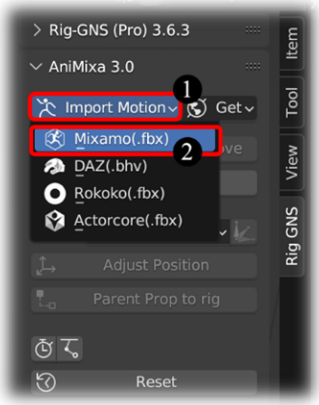


Figure 2.2.1 Load Mixamo

iv. The animation can be fine-tuned by clicking the **adjust** button after selecting a bone from the dropdown list. (*See figure 2.2.2*).
Up/Down movement of the mouse will adjust the animation for the selected bone. Holding down **SHIFT** key while adjusting tilts the selected bone.

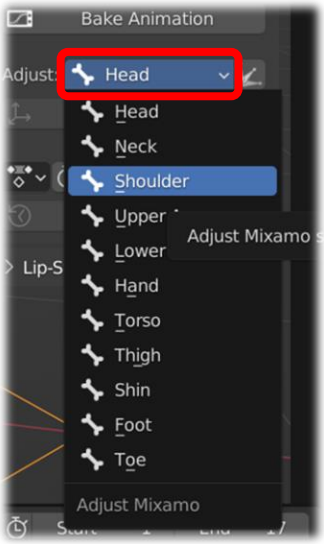


Figure 2.2.2 Bones adjustment

v. When satisfied with adjustment, click the **Bake** button Bake Animation to have animation available in the action editor. (*See figure 2.2.3*).

vi. **Adjust position** button Adjust Position allows for the precise placement of the rig within the scene without moving the root bone.

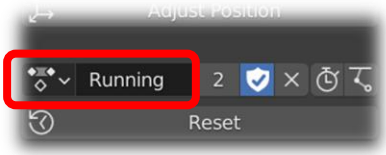


Figure 2.2.3 Animations

a. CTRL + Mouse Movement: Adjusts the position on the Z-axis.
b. SHIFT + Mouse Movement: Locks the adjustment on the X-axis.
c. ALT + Mouse Movement: Locks the adjustment on the Y-axis.

vii. **Parent Prop to Rig** button Parent Prop to rig allows for easy attaching of props to the rig. Simply select the unparented prop and click the button to parent it to the rig.

viii. The **Match Frame** button adjusts the frame range to match the length of animation.

ix. The **Use IK/FK** button toggles between IK and FK. The button can also be used to enable the Rig Layer panel when it's disabled.

x. The **Reset** button Reset resets the rig back to its default pose.

xi. All baked Animations can be accessed in the action dropdown. (*See figure 2.2.4*).

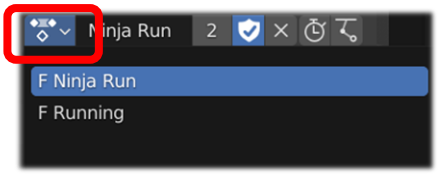


Figure 2.2.4 Baked Animations

2.3 Getting Daz Animation

To acquire Daz animations, follow these steps:

i. After loading a genesis base figure in Daz studio (as explained in ***chapter 1.1***), go to the smart content pane and assign an animation to figure in the ***Animations*** tab. (*See Figure 2.3.1.)*

Figure 2.3.1 Assign animation to figure

ii. Switch the workspace to ***Pose & Animate*** (*see figure 2.3.2).* Otherwise, locate the ***aniMate2*** pane. The turquoise bar on the timeline indicates the animation.
(*See figure 2.3.3*).

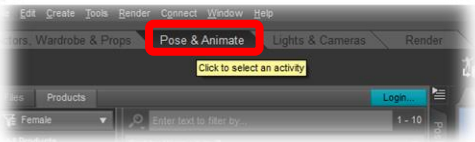


Figure 2.3.2 Pose & Animate

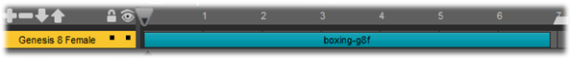


Figure 2.3.3 Animation Bar.

iii. Right click on an empty space along the timeline and select ***Bake to Studio Keyframes*** in the options
(*See Figure 2.3.4*). The green/bluebar below the animation bar indicates the animation has been baked.
(*See Figure 2.3.5*)

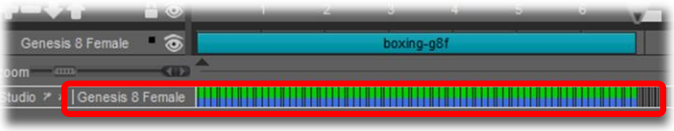


Figure 2.3.5 Baked animation Bar.

iv. Now go to File > Export and export the file as **BioVision Files**.
(*See Figure 2.3.6*) After saving the file, click **Accept** in the BVH Exporter Options without changing the settings.

Figure 2.3.4 Baking Animation

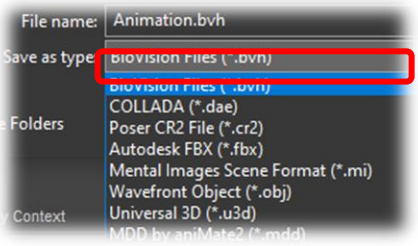


Figure 2.3.6 BioVision Save as type

2.4 Using Daz Animation in Blender

In In Blender, follow these steps to import and preview DAZ(.bvh) animations:

i. Click the "Import Motion" button and choose the DAZ(.bvh) option.
ii. Browse and locate the desired file, then select the "Import Daz BVH" button to import the animation into the scene.
iii. Click "Bind" to assign the imported animation with the character in the scene.
iv. To preview the animation, simply press the play button in the timeline.
v. If needed, you can make adjustments to the animation before finalizing it by baking it to the action editor

2.5 Getting Rokoko Animation

To incorporate Rokoko Video's motion capture capabilities into Blender, follow these step-by-step instructions:

i. **Rokoko Video Website**: In Blender, navigate to the Animixa tab. Locate and click the "Get" button to be redirected to the Rokoko Video website. (See to Figure 2.5.1.)

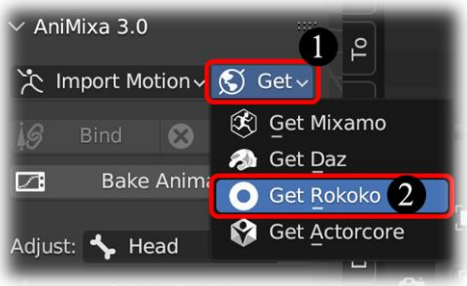
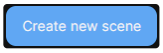


Figure 2.5.1 Get Rokoko

ii. **Rokoko Account**: If you don't have an existing account, signing up is entirely free. Once registered, log in to your Rokoko account.

iii. **New Scene**: Inside Rokoko Video, find the "Create New Scene" button and click it to set up a new motion capture scene.



iv. **Recording Method**: Rokoko Video offers two recording options. Using your device's camera to capture motion data. And importing a local video file for motion capture.
(*See to Figure 2.5.2*.)

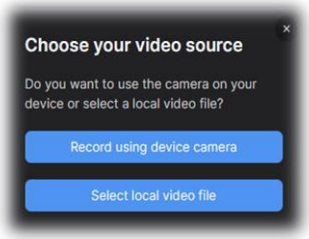
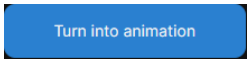

Choose your video source
Do you want to use the camera on your device or select a local video file?
Record using device camera
Select local video file

Figure 2.5.2 Video Source

v. **Convert Video File:** If you opt for the video file import method, with the chosen file is successfully loaded onto the Rokoko Video timeline, locate and select the "Turn into Animation" button to generate the animation data.



vi. **Install Rokoko Studio:** To access the created animation, you need to install the Rokoko Studio software, available for download from the official Rokoko website at https://www.rokoko.com/product

vii. **Animation in Rokoko Studio**: In Rokoko Studio software, log in with the same ID used on the Rokoko website. Upon logging in, the welcome interface should display the animation in the "Recently Added Scenes" section. (See to Figure 2.5.3.)

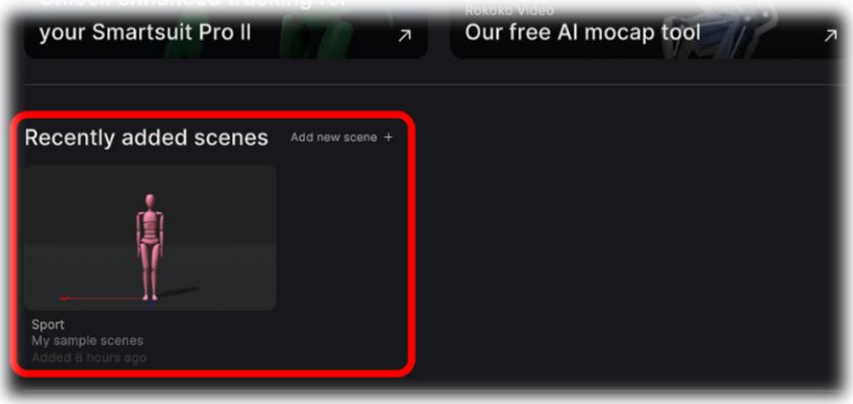


Figure 2.5.3 Recently added scenes

viii. **Animate Actor**: Open the created scene in Rokoko Studio. Attach the animation data to the desired character model, making them the actor in the scene. (See to Figure 2.5.4.)

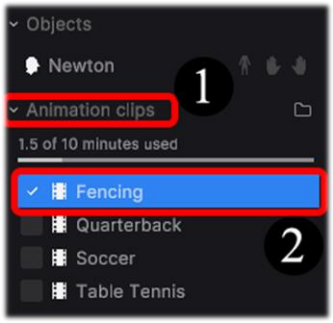


Figure 2.5.4 Animation Clips

ix. **Export Settings**: After adding the animation to the actor, navigate to the right side of the interface and select the "Export" tab. Ensure the following settings are configured correctly: (*See figure 2.5.5*)

- File format: FBX.
- Skeleton Preset: Mixamo.
- FBX version: Binary.

Click the "Export Clips" button to save the file to your preferred folder. This will export the actor with the animation in the specified settings.

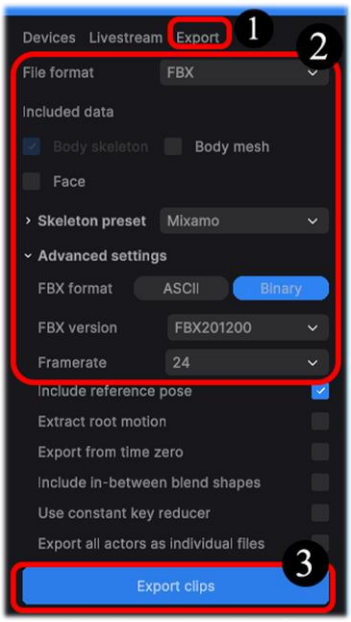


Figure 2.5.5 Export Options

For an in-depth tutorial on using Rokoko Video, consider watching the YouTube video by Sam Lazarus at https://youtu.be/ZpCKukrtSsU

2.6 Getting Actorcore Animation

If you're looking to incorporate Actorcore animations into Blender, follow these straightforward steps:

i. Actorcore Website: In Blender, navigate to the AniMixa tab. Choose the "Get Actorcore" option to access the Actorcore website. (See to Figure 2.6.1)

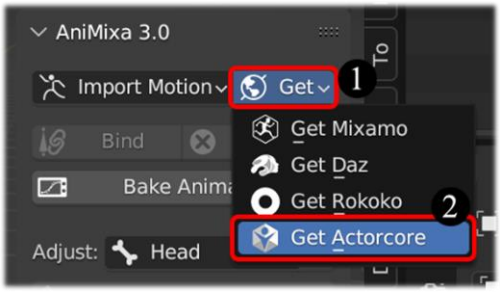


Figure 2.6.1 Get Actorcore

ii. Download Motion: Sign up for a free account on the Actorcore website if you don't have one already. Browse the selection of available free motions. Select a preferred motion from the list to load it into the preview window. Click the "Download" button at the bottom of the page to download the chosen motion. (*See to Figure 2.6.2*)

Figure 2.6.2 Preview Motion

iii. Download Settings: Upon clicking the "Download" button, the download settings window will appear. Choose "Male Robot" as the target character for the animation before proceeding.
(*See to Figure 2.6.3*.)
On the subsequent download settings window, ensure "Blender" is selected as the target application in motion settings. Click the "Next" button to proceed to the final step of the download process.
(*See to Figure 2.6.4.)*

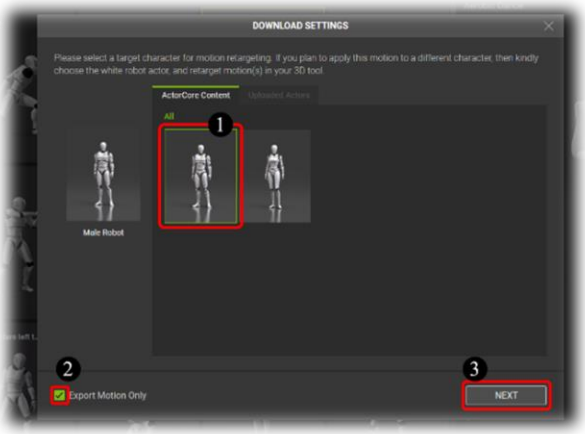


Figure 2.6.3 Target Robot

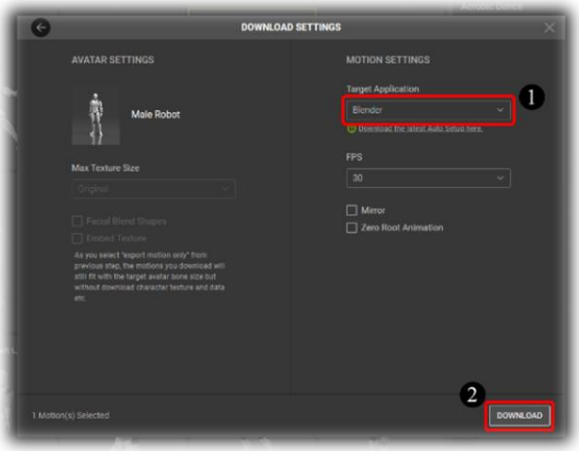


Figure 2.6.4 Motion Settings

iv. Unzip and Import Motion in Blender: Once the download is complete, you will receive a zip file containing the animation. Unzip the downloaded file to access the animation data within. Open Blender and import the motion by using the Actorcore import option and selecting the animation file you unzipped.

2.7 Exporting Blender Animation to Daz

There are two options to export Blender animation to Daz Studio using Rig-GNS,: retargeted animation and keyframe animation. Before proceeding with either method, make sure you have a plain Genesis 3 or 8 figure without any additional accessories that may introduce extra bones. The figure should be exported from Daz Studio using the standard FBX export and then rigged in Blender using Rig-GNS.

i. **Retargeted Animation**: After binding animation to the figure, it can directly exported without baking Animation. No additional steps are required to prepare the animation for export as a BVH file.

ii. **Keyframe Animation**: Manually animated figures using IK or FK bones needs to baked before exporting the animation. To do this:

- With the figure selected, expand the Animixa tab.
- Click the "Bake" button and a prompt will appear, stating that baking animation for Daz will render the rig unusable (*See Figure 2.7.1*).
- Click "OK" to continue with the baking process.
- To regain usability of the rig after exporting keyframe animation, simply press CTRL+Z to revert the baking process.

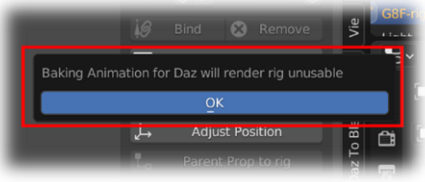


Figure 2.7.1 Bake Prompt

<u>Exporting Animation as BVH File</u>: To export both retargeted and keyframe animation, go to File > Export > Daz (.bvh).

Rename the file as needed and click the "Export DAZ" button to save the animation in your preferred folder (*See Figure 2.7.2*).

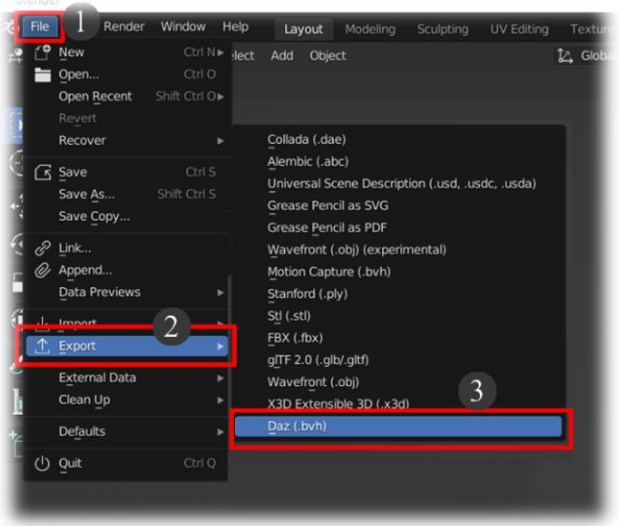


Figure 2.7.2 Export Daz(.bvh)

2.8 Using Blender Animation in Daz

To use Blender animation in Daz Studio, follow these steps:

i. In Daz Studio, ensure that the figure you want to apply the animation to is selected in the scene.

ii. Go to File > Import and choose the BVH file that was previously exported from Blender.

iii. In the Importer Options window, make sure to check the following options before clicking "Accept" (*See Figure 2.8.1.*)

- Adjust Scene to Match the File.
- Limit Joint Rotation.
- Limit Translation to Hip.

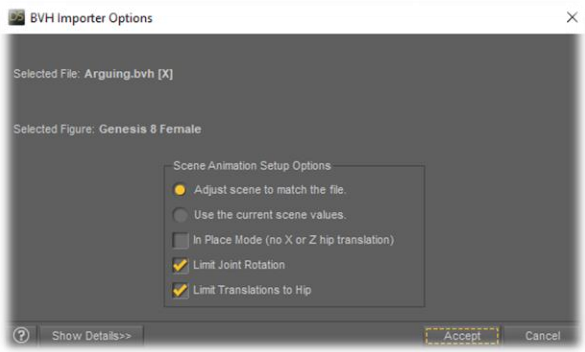


Figure 2.8.1 Importer Option)

iv. To fully apply the imported animation, you might need to disable bone limits in Daz Studio. To do this:

- First, ensure all bones are selected by selecting the figure in the scene pane, then right-click and choose "Select > Select All" (See Figure 2.8.2).
- With all bones selected, go to Edit > Figure > Limits Off (Rotation) to turn off the rotation limits (Refer to Figure 2.8.3).

Figure 2.8.2 Select all bones

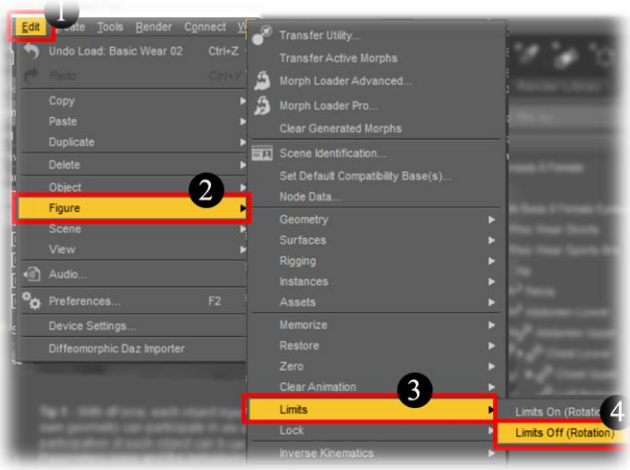


Figure 2.8.3 Disable Limit Rotation

Chapter Three
Lip-sync with Lip-Meter

3.1 Creating lip-sync.

To begin the lip-sync, expand the lip-Meter panel and make the armature "***rig***" the selected object in the first field (*the first field displays a list of all armatures in the scene*). In the second field *(which is a list of all meshes in the scene)*, ensure the mesh "***genesis8figure.shape***" is the selected object (s*ee figure 3.1.1)*

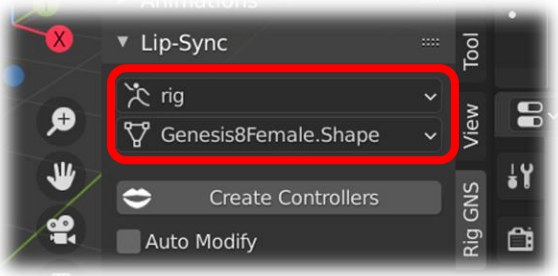


Figure 3.1.1 Armature and Mesh fields.

Now tick the **Auto Modify** checkbox as this will automatically generate various mouth-shapes on the figure when the create controller button is clicked.

Note that the lip-sync part of the addon can be used with a host of other rigged characters and not just genesis figures. However, the auto modify only works for genesis figures rigged with this addon.

Now click ***create controllers*** to have an array of controllers appear by the head in the form of alphabetic custom-shapes. These controllers control the various mouth-shapes. *(See figure 3.1.2*)

To have the controller influence the figure's mouth, select one and scale it by pressing '**S**' on the keyboard. Dragging the mouse pointer away would have the control-meter swing from min to max, hence influencing the figure.

Figure 3.1.2 Controllers

3.2 Modifying Mouth-shapes

To modify any of the mouth-shapes, select its influencing controller e.g., "**BMP**". Go to ***Controllers settings*** in the addon UI, under **Modify figure**, expand **Select Mode** and choose in what mode to modify the mouth-shape i.e., modify either in **Edit mode**, **Sculpt mode** or **Pose mode** (*see Figure 3.2.1*).

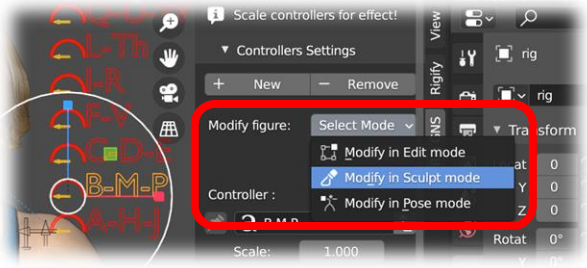


Figure 3.2.1 Modification modes

In Pose mode, move the facial bones to get required shapes while in both Edit mode and Sculpt mode, move vertices to get the required shape.

A notification appears whenever the modification mode is selected (see figure 3.2.2). This informs the user that modification state is active. Click apply Apply *to exit modification state even when no modification was made.*

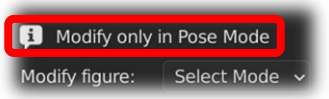


Figure 3.2.2 Notification

After the mouth-shape is modified in any of the three modes (edit, Sculpt or Pose mode), return to addon UI and select apply. Apply
Now scale the controller to see the modified shape by pressing S on the keyboard.

3.3 Adding and removing controllers

To add a new controller, go to the controller settings and click the **New button** + New. A new controller will appear in the viewport with the Label "New" (*see figure 3.31*).

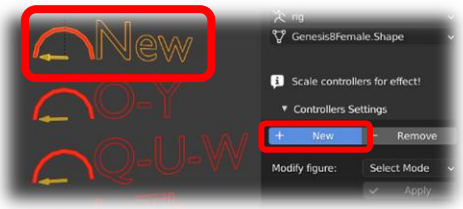


Figure 3.3.1 Adding new controller

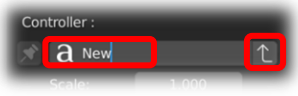
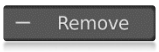


Figure 3.3.2 Renaming Controllers

Still in the controller settings, where it says ***controller***, click in the name field and rename the controller to best describe its function (*see figure 3.3.2*).

After renaming controller, remember to always click the update button in front of the field to have the new name reflect on the added controller.
To assign a mouth-shape or an expression to the new controller, go back to modify figure in the controller settings and follow the steps in section 3.3 (Modifying mouth-shapes).
Any controller can be removed by clicking the **Remove** button 

in the UI.

3.4 Additional Functions

Moving controllers: To move the controllers to a convenient position in the viewport, select the controller and press G on the keyboard to move it. After positioning the controller, click the pin button to have it rest at the new position. This prevent the controller from returning to its previous position when transforms are reset.

Resizing Controllers: To resize the controller, go to scale in the settings. And with the mouse pointer on the values, drag left/right to resize or simply enter a value in the field (*see figure 3.4.1*).

Figure 3.4.1 Adding new controller

Offset Controller: Offsetting the controller moves the name label in respect to the meter. To offset the controller, go to offset in the settings. And with the mouse pointer on the values, drag left/right to move it or simply enter a value in the field (*see figure 3.4.1*).

Figure 3.4.2 Controller offset to right of meter

Chapter Four
Simulation with SimuQuick

4.1 Setting up Mesh.

SimuQuick tab assists with the generation of bones for hair and cloth physics during animation. To use simuQuick, first have the cloth/hair object in edit mode and then make a linear selection of edges across the object, along which the simulation bones will be generated. (See figure 4.1.1)

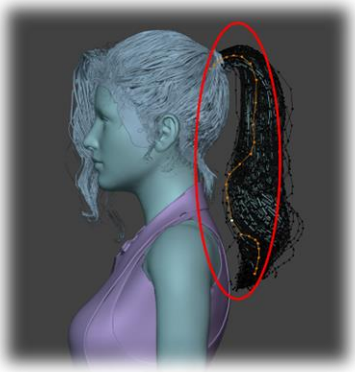


Figure 4.1.1 Linear edges selection

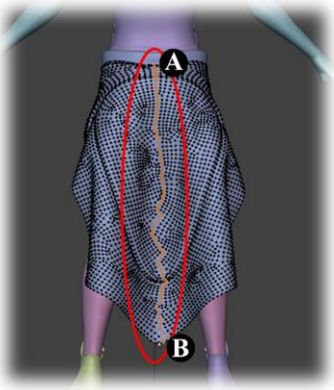


Figure 4.1.2 Select linear edges

Linear selection of edges can be made either by using the **edge loop** (alt + LMB or double-click an edge if *Emulate 3 Button Mouse* option is enabled in preferences) to select linear edges on quadrilateral meshes, or by selecting a starting vertex (point A), hold down **ctrl** key then select the ending vertex (point B) on triangulated or n-gons meshes. (See figure 4.1.2)

4.2 Generate Simu-Bones

The generated simu-bones are used for the physics simulation. Playing the animation after bones are generated will create a simulation on the object. But before generating these bones, there are some options that needs to be discussed.

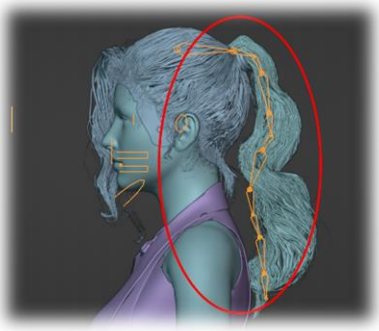


Figure 4.2.1 Generated bones

i. *Collision Mesh*. When enabled, a large collision mesh is created from the object for improved collision physics. This option is recommended when working on meshes with large surface area, such as capes.
ii. *Bone Count*. This option is used to specify the numbers of bones required for the simulation. When left disabled, the addon creates a number of bones it feels is best.
iii. *Parent bone*: Selecting this field displays a list of bones for specifying a parent bone for the generated simu-bones.

Figure 4.2.2 SimuQuick Options

4.3 Simu Meshes.

Simu-meshes are the actual physics meshes controlling the simulated object. These meshes are hidden in the simu-collection and are marked with asterisk (*). There are three toggle options for modifying these meshes (*See figure 4.3.1*). These toggle options are discussed below.

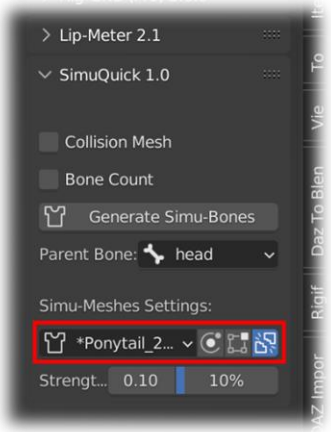


Figure 4.3.1 Mesh Buttons

Isolate Physic button, isolates the collision mesh in local view for clearer viewing of the interaction between the mesh and the figure. (*See figure 4.3.2*)

Edit Mesh button toggles Edit Mode for adjusting vertices of the simu-meshes.

Collision buttons enables and disables the collision physics of the meshes.

Strength value controls the degree of simulation of the meshes during animation. It consists of two fields.

The first field is a float value for specifying the weight value of the simu-mesh. The second field specifies the percentage of weight value applied on the mesh.

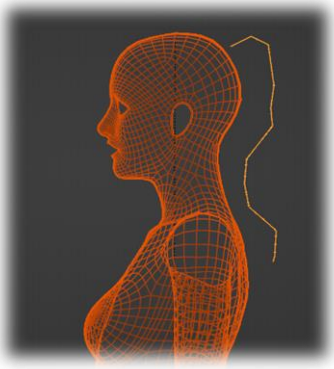


Figure 4.3.2 Mesh Buttons

Appendix

Installing Rig-GNS add-on

Rig-GNS is available on Gumroad. Clicking the provided link or copying the link in your browser will direct you to the addon on Gumroad. You will be requiered to enter a fair amount, which could be any amount over the given price. Selecting the "*Buy this*" button will open a payment page where you're required to enter a valid email. (*See figure A1*).

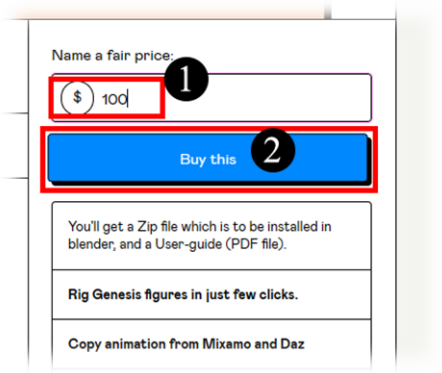

Name a fair price:
$ 100
1
Buy this
2
You'll get a Zip file which is to be installed in blender, and a User-guide (PDF file).
Rig Genesis figures in just few clicks.
Copy animation from Mixamo and Daz

Figure A1 *Buy this button*

After a successful purchase, the receipt page opens up, which is also sent to the provided email. Select '*View content*' to load the download page (*See figure A2*). On the receipt is a license key, which can also be found on the download page. The license key is required to activate the addon. (*See figure A3*)

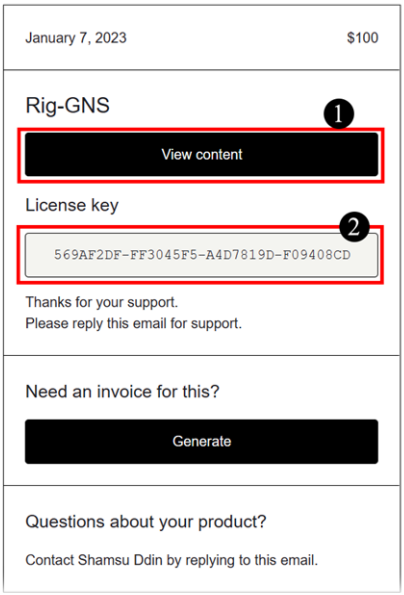


Figure A2 *Mailed receipt*

Loading the download page will list a number of zip files which are different versions of the addon. Ensure to download the latest version (the file with the highest version number).

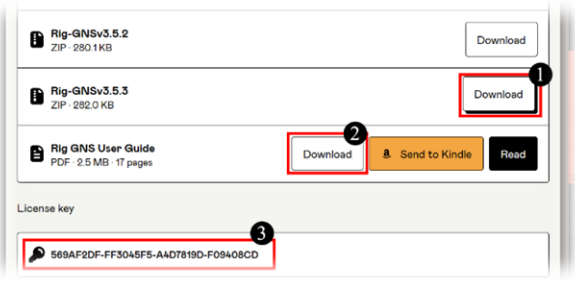


Figure A3 *Download Page*

Now with the zip file downloaded, open blender and go to **Edit** menu > **Preferences** *(See figure A4)*. Select **Add-ons** from the preferences options *(See figure A5)*.

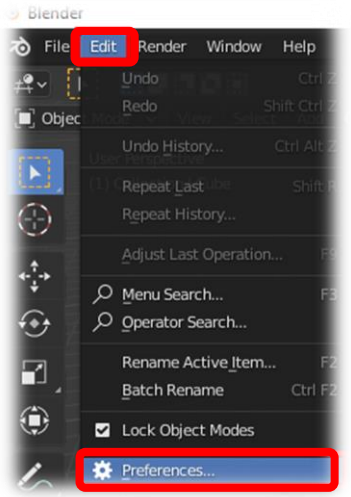


Figure A4 Preferences

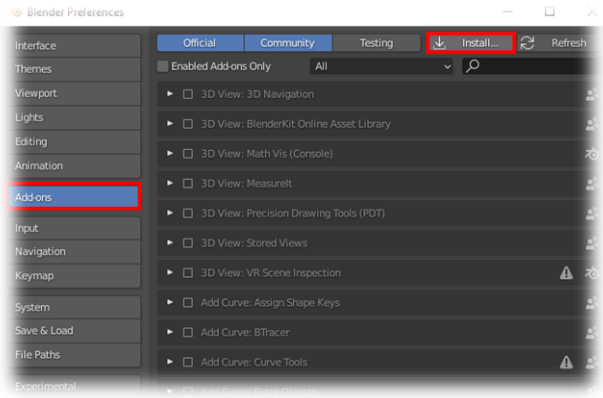
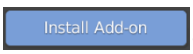


Figure A5 Installing Add-on

Figure A6 Enable Add-on

Select the **Install** button

from the top-menus *(See figure A5)*. Locate and select the downloaded Rig-GNS zip file and click the **Install Add-on** button 

. Enable **Rig-GNS** add-on by ticking the checkbox *(See figure A6)*.

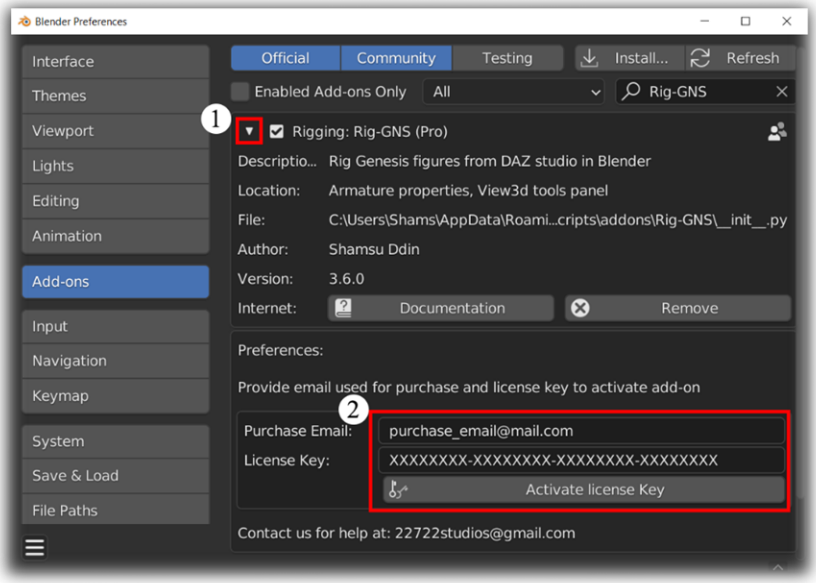


Figure A7 Activate License

The addon has to be activated to use all features. To activate the addon, click the drop-down arrow (*see 1 in figure A7*) and enter the email provided during

purchase and the license key in their respective fields. Ensure to have an internet connection to activate the addon.

The Rigify add-on also needs to be enabled before Rig-GNS can be used. The Rigify add-on comes with blender. To enable the Rigify add-on, search for **“Rigify”** in the search box and tick its check-box to enable it.

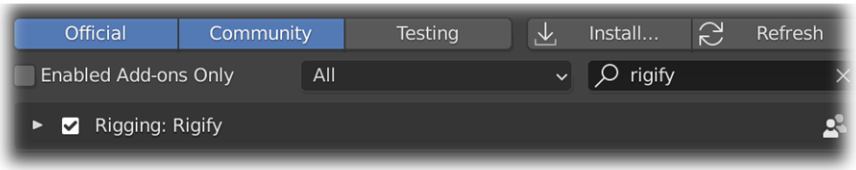


Figure A5 Enable Rigify Add-on